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10/618,208	07/11/2003	Christopher F. Parker	149-0104US	4204

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EXAMINER

HARPER, LEON JONATHAN

ART UNIT PAPER NUMBER

2166

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/618,208	Applicant(s) PARKER ET AL.	
	Examiner Leon J. Harper	Art Unit 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 7/18/2006 has been entered. Claims 1,5,7,8,13,17,19,20,25,29,30 and 35 have been amended. No claims have been cancelled or added. Accordingly claims 1-38 are pending in this office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6070170 (hereinafter Frisk) in view of US 20030135478 (hereinafter Marshall).

As for claim 1 Frisk discloses: determining one or more portions of a target database that will be affected by the change command (See column 6 lines 5-9);

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creating one or more shadow portions of the determined one or more portions (See column 6 lines 25-27) swapping the one or more shadow portions for the determined one or more portions (See column 6 lines 42-44) wherein the act of creating and changing occur before the act of executing and further wherein said database update method does not cause a user outage (See column 6 lines 60-65).

While Frisk does not differ substantially from the claimed invention the disclosure of receiving a database change command, to alter the structure of a target database, changing the one or more shadow portions In accordance with the change command, executing the change command against the target database is not necessarily explicit. Marshall however does disclose: receiving a database change command (See paragraph 0037 "transactions make changes to the database"); to alter the structure of a target database (See paragraph 0038) changing the one or more shadow portions In accordance with the change command (See paragraph 0038); executing the change command against the target database (See paragraph 0043);, wherein the act of creating and changing occur before the act of executing and further wherein said database update method does not cause a user outage. It would have been obvious to an artisan of ordinary skill in the pertinent art to have incorporated the teachings of Marshall into the system of Frisk. The modification would have been obvious because there is a desire to have a non-blocking database in order to minimize the unavailability of the database during updates and re-organizations (See Frisk column 2 lines 53-57).

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As for claim 2 the rejection of claim 1 is incorporated, and further Frisk discloses: wherein the target database comprises a DB2 database (See column 4 lines 37-38).

As for claim 3 the rejection of claim 2 is incorporated, and further Frisk discloses: wherein the database change comprises an alter command (See column 6 lines 5-6 note: alter command modifies the index of the table that is = to a reorganize command).

As for claim 4 the rejection of claim 2 is incorporated, and further Frisk discloses: wherein the determined one or more portions comprise one or more partitions (See column 6 lines 5-9 note: there are pages; one for each portion).

As for claim 5 the rejection of claim 1 is incorporated and further Frisk discloses: wherein the act of creating comprises unloading the determined one or more portions into work files (See column 6 lines 7-10 note: portions are unloaded into flat files).

As for claim 6 the rejection of claim 5 is incorporated and further Frisk discloses: wherein the act of updating comprises updating the work files in accordance with change command into one or more shadow portions (See column 6 lines 8-12).

As for claim 7 the rejection of claim 1 is incorporated, and further Frisk discloses: wherein the act of updating further comprises updating the one or more shadow

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portions to incorporate data content changes in the target database occurring since said act of receiving and before said act of executing (See column 6 lines 35-37).

As for claim 8 the rejection of claim 7 is incorporated, and further Frisk discloses: wherein target database log files are used to drive said act of updating the one or more shadow portions to incorporate data content changes in the target database occurring since said act of receiving and before said act of executing (See column 6 lines 33-40).

As for claim 9 the rejection of claim 1 is incorporated, and further Frisk discloses: establishing a lock on the target database after said act of executing and before said act of swapping (See column 3 lines 25-30).

As for claim 10 the rejection of claim 9 is incorporated, and further Frisk discloses: removing a restricted state status from at least one of the determined one or more portions resulting from the act of executing, said act of removing occurring before the act of swapping (See column 7 lines 60-65).

As for claim 11 the rejection of claim 10 is incorporated, and further Frisk discloses: wherein the act of removing is performed after the act of establishing (See column 8 lines 4-9).

As for claim 12 the rejection of claim 1 is incorporated, and further Marshall discloses: committing the change command, said act of committing to be performed before the act of swapping (See paragraph 0037).

Claims 13-24 are program storage device claims corresponding to the database method claims 1-12 respectively, and are thus rejected for the same reasons as set forth in the rejection of claims 1-12..

Claims 25-27 are system claims corresponding to the database method claims 1-3 respectively , and are thus rejected for the same reasons as set forth in the rejection of claims 1-3.

As for claim 28 the rejection of claim 25 is incorporated, and further Frisk discloses: further Frisk discloses: wherein the instructions to create comprise instructions to unload the determined one or more portions into work files (See column 6 lines 7-10 note: portions are unloaded into flat files) and change the work files in accordance with the change command into one or more shadow partitions (See column 6 lines 34-37).

Claims 29-34 are database system claims corresponding to the database method claims 7-12 respectively and are thus rejected for the same reasons as set forth in the rejection of claims 7-12.

As for claim 35, the rejection of claim 25 is incorporated, and further Frisk discloses: wherein the storage device comprises one or more direct access storage devices (See column 5 lines 17-22).

As for claim 36 the rejection of claim 35 is incorporated, and further Marshall discloses: wherein the one or more direct access storage devices are operatively coupled to the computer unit by a computer network (See paragraph 0035).

As for claim 37 the rejection of claim 36 is incorporated, and further Marshall discloses: wherein the computer network comprises the Internet (See paragraph 0034).

As for claim 38 the rejection of claim 36 is incorporated, and further Marshall discloses: wherein the computer network comprises an Intranet (See paragraph 0034 note the lans, and other local setups).

Response to Arguments

Applicant's arguments filed 7/18/2006 have been fully considered but they are not persuasive.

Applicant argues:

Friske is explicitly directed to the reorganization of data within existing database and not making structural changes in the database itself. This distinction is described in the application as filed at paragraphs 0001,0007,0014,0015,0017,0018,0024 and figures 3("database structure update process 300") and 4 (modify the database in accordance with a DB2 Alter command see element 415). In summary: (1) the claimed invention is directed to making structural changes in a database without causing a user outage; (2) Friske and Marshall are only directed to reorganizing data within an existing database structure; and (3) neither Friske or Marshall teach, describe or fairly suggest that their "reorganization" process is applicable to making structural changes in an underlying database.

Examiner responds:

Examiner is not persuaded. Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the specification. Interpretation of Claims- Broadest Reasonable Interpretation, during patent examination, the pending claims must be 'given the broadest reasonable interpretation consistent with the specification.' Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be

interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969). Applicant points to the alter command as an example of a structural change in a database. The alter command can add or modify fields to a database, the alter command can also reclaim rows or columns thus altering the database. The cited references also make structural changes to a database, for example Marshall paragraph 0008 discloses that "Reorganization may also reclaim previously unusable space in the database."

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon J. Harper whose telephone number is 571-272-0759. The examiner can normally be reached on 7:30AM - 4:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LJH

Leon J. Harper

October 16, 2006


MOHAMMAD ALI
PRIMARY EXAMINER